PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q63227
Joon-bo CHOI, et al.	
Appln. No.: 09/904,566	Group Art Unit: 2154
Confirmation No.: 2317	Examiner: Kenny S. LIN
Filed: July 16, 2001	

For: METHOD FOR MANAGING NETWORK WHEN MASTER DISAPPEARS

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of $500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: January 30, 2006

Attorney Docket No.: Q63227

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For: METHOD FOR MANAGING NETWORK WHEN MASTER DISAPPEARS

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37[1], Appellant submits the following:

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[1] Please note that since the due date of January 28, 2006 fell on a Saturday, this Brief is being **timely** filed on the next business day of Monday, January 30, 2006.

I.   REAL PARTY IN INTEREST

The real party in interest in this appeal is Samsung Electronics Co., Ltd. Assignment of

the application was submitted in U.S. Patent and Trademark Office on October 29, 2001, and

recorded on the same date at Reel 012290, Frame 0462.

II.   RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences that will affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III.   STATUS OF CLAIMS

Claims 1-14 are all of the claims pending in the application. Claims 1-14 are rejected.

All of the claims are set forth in the attached Appendix.

IV.   STATUS OF AMENDMENTS

As set forth in the November 10, 2005 Advisory Action, the Examiner indicates that the

Amendment under 35 U.S.C. § 1.116 filed October 28, 2005 will be entered for purposes of

appeal.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed to "[a] method for building up backup master information." The method of claim 1 recites "receiving connection information from at least one of a plurality of slaves in a network." Referring to FIGS. 3 and 4, a network master 400 receives connection information from the network slaves 300, i.e., A 300a, B 300b, C 300c, D 300d and E 300e, in order to check the connection status with each of the network slaves 300 in the network (S310). The connection information includes received signal strength indication (RSSI) and/or link quality information which is associated with the distance between the master 400 and each of the network slaves 300.[2]

Claim 1 further recites "determining a priority of said at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the received connection information." Referring to FIGS. 3 and 4, the network master 400 determines the rank information of a backup master to be chosen as a new network master 400 when the preexisting network master leaves the network operating region, based on the connection information (S330). The rank information on the backup masters more likely to be chosen as a new network master is determined according to RSSI and/or link quality values. That is, a slave having higher RSSI and/or link quality values is given a higher rank as a backup master in order to be chosen as a new network master. This increases the probability of reconfiguring a network with the remaining slaves when a preexisting network master leaves the network operating region.[3]

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[2] Specification at page 12, lines 3-15.

[3] Specification at page 12, line 20 – page 13, line 6.

Lastly, claim 1 recites "announcing the determined priority to at least another one of the plurality of slaves." After the rank of the backup master, which is used for choosing a new network master, is determined with respect to all the slaves in step S330, the network master 400 announces the rank information of the backup master determined in step S330, to each slave through a broadcasting channel (S350).[4]

Independent claim 8 is directed to "[a] method for designating a new master of a network when a preexisting network master disappears." Claim 8 recites "determining at a slave whether the preexisting network master has disappeared" and "if the preexisting network master has disappeared, checking a rank assigned to the slave based on connection information received from the slave, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master."[5] Claim 8 further recites "changing the slave to the new network master if it determined that the rank is highest of any one assigned to a plurality of slaves."[6]

Independent claim 14 is directed to "[a] method for establishing a connection between a new master and a remaining plurality of slaves of a network when a preexisting network master disappears." Claim 14 recites "checking whether the preexisting network master has disappeared" and "checking backup master rank information, when it is determined that the preexisting network master has disappeared."[7] Claim 14 further recites "attempting to establish a connection with the new network master when it is determined that one of the remaining

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[4] Specification at page 13, lines 6-10.

[5] Specification at page 14, line 9 – page 14, line 20.

[6] Specification at page 14, lines 20 and 21.

[7] Specification at page 14, line 9 – page 14, line 20.

plurality of slaves does not have a highest priority, according to the backup master rank

information" and "remaining as one of the remaining plurality of slaves if a connection with the

new network master is established."[8]

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[8] Specification at page 16, line 20 – page 17, line 7.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(A) Claims 1, 2, 7-9 and 14 are rejected under 35 U.S.C. § 102(a) as being anticipated by Ying (U.S. Patent No. 6,061,600).

(B) Claims 8 and 9 are rejected under 35 U.S.C. § 102(a) as being anticipated by Ying.

(C) Claim 14 is rejected under 35 U.S.C. § 102(a) as being anticipated by Ying.

(D) Claims 1, 2 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over newly cited van der Tuijn et al. (U.S. Patent No. 6,683,886; hereafter "van der Tuijn") in view of Ying.

(E) Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and Erekson et al. (U.S. Patent No. 6,836,862; hereafter "Erekson").

(F) Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying, Erekson and "Official Notice".

(G) Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and "Official Notice".

(H) Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn.

(I) Claims 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn, Akyol et al. (U.S. Patent No. 6,701,448; hereafter "Akyol") and "Official Notice".

VII.   ARGUMENT

A.   Rejection of claims 1, 2 and 7 under 35 U.S.C. § 102(a) as being anticipated by Ying

Appellant respectfully submits that claims 1, 2, 7-9 and 14 would not have been anticipated by Ying.[2]

Independent claim 1 is directed to "[a] method for building up backup master information." Claim 1 recites:

(a) receiving connection information from at least one of a plurality of slaves in a network;

(b) determining a priority of said at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the received connection information; and

(c) announcing the determined priority to at least another one of the plurality of slaves.

Appellant respectfully submits that claim 1 would not have been anticipated by Ying.

In the February 16, 2005 Office Action, the Examiner cites various portions of Ying including col. 2, lines 44-54; col. 7, lines 35-49; col. 10, lines 50-67; and col. 11, lines 1-30 and 51-58 for allegedly disclosing the claimed features of step (b). However, Appellant respectfully submits that it is quite clear that Ying does not teach or suggest determining a priority of at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the connection information received from the at least one of the plurality of slaves. Instead, the cited portions of Ying simply disclose that each of the slave nodes is pre-

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[2] Appellant notes that neither the July 28, 2005 Final Office Action nor the November 10, 2005 Advisory Action provide any reasons for the continued rejection of claims 1, 2 and 7-9 under 35 U.S.C. § 102 based on Ying.

programmed to detect a failure mode condition after a different amount of time than the other

slave nodes are programmed such that a slave node slave node which is pre-programmed with

the shortest failure mode detection time becomes the substitute master node upon detection a

failure mode condition. That is, the programmed amount time that a slave node waits to receive

control messages from the master node before taking over for the master node is not determined

based on connection information received from a slave node.

In the February 16, 2005 Office Action cites col. 2, lines 44-58 and col. 11, lines 24-35 of

Ying for allegedly disclosing all of the claimed features of step (c). However, Applicant

respectfully submits cited portions of Ying do not teach or suggest announcing the determined

priority to at least another one of the plurality of slaves. Instead, the slaves are simply

programmed to detect a failure mode condition after different amounts of time. That is,

programming a time interval does not inform a slave of a determined priority of another slave.

Accordingly, Appellant respectfully submits that independent claim 1, as well as

dependent claims 2 and 7, should be allowable over Ying since the cited reference does not teach

or suggest all of the features of the claimed invention.

(B)   Rejection of claims 8 and 9 under 35 U.S.C. § 102(a) as being anticipated by
Ying

Appellant respectfully submits that claims 8 and 9 would not have been anticipated by

Ying.

Independent claim 8 is directed to "[a] method for designating a new master of a network

when a preexisting network master disappears." Claim 8 recites:

(a) determining at a slave whether the preexisting network master has disappeared;

(b) if the preexisting network master has disappeared, checking a rank assigned to the

slave based on connection information received from the slave, wherein the rank is used for

choosing a new network master and is received before the disappearance of the preexisting

network master; and

    (c) changing the slave to the new network master if it determined that the rank is highest

of any one assigned to a plurality of slaves.

    In February 16, 2005 Office Action, the Examiner cites various portions of Ying

including col. 2, lines 44-54; col. 7, lines 35-49; col. 10, lines 50-67; and col. 11, lines 1-30 and

51-58 for allegedly disclosing all of the claimed features of step (b). However, Appellant

respectfully submits that cited portions of Ying do not teach or suggest checking a rank assigned

to the slave based on connection information received from the slave, wherein the rank is used

for choosing a new network master and is received before the disappearance of the preexisting

network master. Instead, as discussed above, Ying simply discloses that each of the slave nodes

is pre-programmed to detect a failure mode condition after a different amount of time than the

other slave nodes are programmed with such that a slave node which is pre-programmed with the

shortest failure mode detection time becomes the substitute master node upon detection a failure

mode condition. That is, the programmed amount time that a slave node waits to receive control

messages from the master node before taking over for the master node is not a rank which is

assigned to the slave node based on connection information received from the slave and is not

checked if the preexisting network master has disappeared.

    In the February 16, 2005 Office Action, the Examiner cites col. 2, lines 44-58; col. 7,

lines 35-49; and col. 11, lines 24-35 of Ying for allegedly disclosing all of the features of step

(c). However, nowhere do the cited portions of Ying teach or suggest changing the slave to the

new network master if is determined that the rank is highest of any one assigned to a plurality of

slaves. Instead, the slaves are simply programmed to detect a failure mode condition after

different amounts of time.

Accordingly, for at least the above reasons, Appellant respectfully submits that claims 8 and 9 should be allowable over Ying.

(C)   Rejection of claim 14 under 35 U.S.C. § 102(a) as being anticipated by Ying

Independent claim 14 is directed to "[a] method for establishing a connection between a new master and a remaining plurality of slaves of a network when a preexisting network master disappears." Claim 14 recites:

(a) checking whether the preexisting network master has disappeared;

(b) checking backup master rank information, when it is determined that the preexisting network master has disappeared in the step (a);

(c) attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information; and

(d) remaining as one of the remaining plurality of slaves if a connection with the new network master is established in the step (c).

Appellant respectfully submits that claim 14 would not have been anticipated by Ying because the cited reference does not teach or suggest claimed steps (b) or (c).

The Examiner asserts that the claim feature of checking backup master when it is determined that the preexisting network master has disappeared allegedly reads on Ying's disclosure that "[u]pon a failure to receive [a] signal from the master, the slave begin[s] its wait mode and determines that the master has failed when the wait period elapses."[10] However, Appellant submits that the Examiner's position is improper since Ying does not determine that the master has disappeared until the predetermined time period lapses. In particular, Ying simply discloses that when a slave node fails to receive control messages from the master node for a

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[10] See July 28, 2005 Office Action at page 14, item 37.

period exceeding its programmed failure mode detection time period, the slave node takes over for the master node.

The Examiner further asserts that "Ying taught that once the master node fail[s] to respond to the slave node with an expected time, the slave node then trigger[s] the wait period time. Therefore, there exists two different time periods: 1) expected response time and 2) wait period time."[11] However, the Examiner has misconstrued the teachings of Ying. In particular, nowhere does Ying disclose that there are two time periods. Instead, as discussed on col. 10, line 50 through col. 11, line 14, Ying only discloses a single time period, i.e., the wait time of the timer. Each time an uplink transceiver of a slave node receives a master-control signal from a first-tier master node, the timer is reset by a CPU of the slave node. If the timer times out, then the CPU detects that the master node has a failure condition and responds by asserting a failure mode response procedure in which the slave node performs as the master node.

Thus, Appellant respectfully submits that it is quite clear that Ying does not disclose "checking backup master rank information, when it is determined that the preexisting network master has disappeared."

With regard to step (c), the Examiner cites col. 2, lines 37-39; col. 7, lines 39-49; col. 9, lines 6-22 and 43-48; col. 10, lines 15-23, 36-43 and 54-62; and col. 11, lines 1-9 and 24-58 of Ying in support of the rejection. However, nowhere do the cited portions of Ying teach or suggest attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information. Instead, Ying simply discloses that when a slave node fails to

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[11] See November 10, 2005 Advisory action at page 5, first full paragraph.

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receive control messages from the master node for a period exceeding its programmed failure mode detection time period, the slave node takes over for the master node.

Accordingly, Appellant respectfully submits that claim 14 should be allowable over Ying.

(D) Rejection of claims 1, 2 and 7 under 35 U.S.C. § 103(a) as being unpatentable over newly cited van der Tuijn in view of Ying

With regard to independent claim 1, the Examiner cites column 7, lines 36-53 of van der Tuijn for allegedly disclosing all of the features of the claimed invention except for determining priority for at least one of a plurality of slaves to be used as a backup master when a network master disappears. However, the Examiner cites col. 2, lines 34-62, col.7, lines 35-49, col. 10, lines 50-67, col. 11, lines 1-30 and 51-58 for allegedly disclosing "asserts that Ying discloses this features and that it would have been obvious to modify van der Tuijn "to provide system recovering from a failure of the master."[12]

Appellant respectfully submits that van der Tuijn and Ying, alone or in combination, do not teach or suggest all of the features of independent claim 1, and one of ordinary skill in the art would not have been motivated to modify van der Tuijn based on the teaching of Ying to produce the claimed invention.

Van der Tuijn discloses communication system in which a master unit is configured to analyze established communication links to determine priority of communications with associated slave units initially upon communication start-up and following coupling or decoupling of an associated slave unit.[13] In particular, a transmission order of packets via

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[12] July 28, 2005 Office Action at page 5, item 11.

[13] van der Tuijn at col. 4, line 63 – col. 5, line 4.

different communication links is prioritized based on criteria such as data transfer rates, maximum data delay, type of data, and time-out.[14]

The Examiner contends that "van der Tuijn taught the invention substantially as claimed including a method for building up backup master information." However, Appellant respectfully submits that it is quite clear that van der Tuijn does not disclose any of the features of claim 1 except for receiving connection information from at least one slave in a network. Nowhere does van der Tuijn even mention determining a backup master priority. Instead, van der Tuijn simply discloses determining prioritizing communication links and enabling packet transmission according to the determined prioritization. Further, determining priority for transmission of data is not in any manner related to determining a backup master priority.

As discussed above, Appellant respectfully submits that it is quite clear that Ying does not teach or suggest determining a priority of at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the connection information received from the at least one of the plurality of slaves. Instead, the cited portions of Ying simply disclose that each of the slave nodes is pre-programmed to detect a failure mode condition after a different amount of time than the other slave nodes are programmed such that a slave node slave node which is pre-programmed with the shortest failure mode detection time becomes the substitute master node upon detection a failure mode condition. That is, the programmed amount time that a slave node waits to receive control messages from the master node before taking over for the master node is not determined based on connection information received from a slave node.

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[14] van der Tuijn at col. 7, lines 1-3 and 45-47.

Further neither van der Tuijn nor Ying disclose "announcing the determined priority to at least another one of the plurality of slaves." Although the Examiner cites col.7, lines 53-55 for allegedly disclosing this feature, the cited portion of van der Tuijn simply discloses that priorities of links are rescheduled when a new link is added. On the other hand, Ying simply discloses that the slaves are programmed to detect a failure mode condition after different amounts of time (i.e., programming a time interval does not inform a slave of a determined priority of another slave).

Nor has the Examiner provided any objective reason why one of ordinary skill in the art would have been motivated to modify van der Tuijn based on Ying to include this feature of the claimed invention.[15] The criteria that van der Tuijn utilizes to determine communication link priority (i.e., criteria such as data transfer rates, maximum data delay, type of data, and time-out), are not factors which would be utilized to determine backup master priority. That is, when determining backup master priority, the primary consideration is the distances of the slave devices to the master device. For example, the present invention utilizes parameters such as received signal strength (RSSI) and link quality information (error rate), which are closely related to the distances between the slaves and the master, in order to determine master backup priority.

Further, in Ying's system, the slave nodes are connected to the master node via a wire bus such that Ying is not concerned with the distances between the slave nodes and the master

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[15] "To support the conclusion that the claimed invention is directed to obvious subject matter, either references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference." *Ex parte Clapp* 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

node. Nor does Ying disclose any particular criteria for selecting the different failure mode detection times lengths of the slave nodes.

Thus, one of ordinary skill in the art would not have been motivated to utilize van der Tuijn's method of determining communication link priority to determine a backup master priority.

Accordingly, Appellant respectfully submits that independent claim 1, as well as dependent claims 2 and 7, should be allowable over van der Tuijn and Ying because the cited references do not teach or suggest all of the features of the claims and one of ordinary skill in the art would not have been motivated to modify van der Tuijn based on the teachings of Ying to produce the claimed invention.

(E) Rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and Erekson

Appellant respectfully submits that it is quite clear that Erekson does make up for the above noted deficiencies of van der Tuijn and Ying. The Examiner simply cites Erekson for disclosing devices which measure the strength of an incoming signal. Nowhere does Erekson teach or suggest using the measured strength of an incoming signal to determined backup master priority. Accordingly, Appellant respectfully submits that claim 3 should be allowable over the cited references at least by virtue of its dependency on claim 1.

(F) Rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying, Erekson and "Official Notice"

Appellant respectfully submits that neither Erekson nor the Examiner's improper reliance on Official Notice make up for the above noted deficiencies of van der Tuijn and Ying.

Accordingly, Appellant respectfully submits that claims 4 and 5 should be allowable over the

cited references at least by virtue of their dependency on claim 3.

(G) Rejection of claim 6 under 35 U.S.C. § 103(a) as being unpatentable over van der Tuijn in view of Ying and "Official Notice"

Appellant respectfully submits that the Examiner's improper reliance on Official Notice

does not make up for the above noted deficiencies of van der Tuijn and Ying. Accordingly,

Appellant respectfully submits that claim 6 should be allowable over the cited references at least

by virtue of its dependency on claim 1.

(H) Rejection of claims 8 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn

With regard to independent claim 8, the Examiner asserts that Ying discloses all of the

features of the claimed invention except for the rank assignment is based on connection

information received from the slave. However, the Examiner cites col. 7, lines 36-55 of van der

Tuijn for allegedly disclosing this feature and asserts that it would have been obvious to modify

Ying "because van der Tuijn's teaching of determining slaves priority ranking based on slaves

coupling and decoupling enables Ying's method to reorder the rankings of the slaves when new

slaves connect to the master."

Appellant submits that it is quite clear that the combination of Ying and van der Tuijn

does not teach or suggest claimed steps of:

(1) if the preexisting network master has disappeared, checking a rank assigned to the

slave based on connection information received from the slave, wherein the rank is used for

choosing a new network master and is received before the disappearance of the preexisting

network master; and/or

(2) changing the slave to the new network master if it determined that the rank is highest

of any one assigned to a plurality of slaves.

Instead, Ying simply discloses that each of the slave nodes is pre-programmed to detect a

failure mode condition after a different amount of time than the other slave nodes are

programmed with such that the first slave node slave node which is pre-programmed with the

shortest failure mode detection time becomes the substitute master node upon detection a failure

mode condition. That is, the programmed amount time that a slave node waits to receive control

messages from the master node before taking over for the master node is not a rank which is

assigned to the slave node based on connection information received from the slave and is not

checked if the preexisting network master has disappeared.

In February 16, 2005 Office Action, the Examiner cites various portions of Ying

including col. 2, lines 44-54; col. 7, lines 35-49; col. 10, lines 50-67; and col. 11, lines 1-30 and

51-58 for allegedly disclosing all of the claimed features of step (b). However, Appellant

respectfully submits that cited portions of Ying do not teach or suggest checking a rank assigned

to the slave based on connection information received from the slave, wherein the rank is used

for choosing a new network master and is received before the disappearance of the preexisting

network master. Instead, as discussed above, Ying simply discloses that each of the slave nodes

is pre-programmed to detect a failure mode condition after a different amount of time than the

other slave nodes are programmed with such that a slave node which is pre-programmed with the

shortest failure mode detection time becomes the substitute master node upon detection a failure

mode condition. That is, the programmed amount time that a slave node waits to receive control

messages from the master node before taking over for the master node is not a rank which is

assigned to the slave node based on connection information received from the slave and is not

checked if the preexisting network master has disappeared.

Further, nowhere do the cited portions of Ying teach or suggest changing the slave to the

new network master if is determined that the rank is highest of any one assigned to a plurality of

slaves. Instead, Ying's slave nodes are simply programmed to detect a failure mode condition

after different amounts of time. Ying's disclosure that a slave node performs as the master node

if it detects the master node has a failure condition due to expiration of timer is not the same as

or analogous to determining that an assigned rank is the highest of any rank assigned to the

slaves since Ying's slaves do not know their own rank or that of other slaves.

Moreover, one of ordinary skill in the art would have been motivated to modify Ying

based van der Tuijn on include these missing features of the claimed invention.[16] The Examiner

asserts that van der Tuijn discloses "a method to determine slave priority by using connection

information received from the slaves."[17] However, Appellant respectfully submits that the

Examiner has mischaracterized the teachings of van der Tuijn since the cited reference simply

discloses determining priority for transmission of data, which is not in any manner related to

determining slave priority or backup master priority. Thus, the Examiner alleged motivation for

modifying Ying (i.e., "because van der Tuijn's teaching of determining slaves priority ranking

based on slaves coupling and decoupling enables Ying's method to reorder the rankings of the

---

[16] "To support the conclusion that the claimed invention is directed to obvious subject matter, either references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference." *Ex parte Clapp* 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

[17] July 28, 2005 Office Action at pages 9, item 24 and November 10, 2005 Advisory Action at page 5, lines 1-3.

slaves when new slaves connect to the master") is not supported by the teachings of van der Tuijn.

Further, the criteria that van der Tuijn utilizes to determine communication link priority (i.e., criteria such as data transfer rates, maximum data delay, type of data, and time-out) are not factors which would be utilized to determine backup master priority. That is, when determining backup master priority, the primary consideration is the distances of the slave devices to the master device. For example, the present invention utilizes parameters such as received signal strength (RSSI) and link quality information (error rate), which are closely related to the distances between the slaves and the master, in order to determine master backup priority.

In Ying's system, the slave nodes are connected to the master node via a wire bus such that Ying is not concerned with the distances between the slave nodes and the master node. Nor does Ying disclose any particular criteria for selecting the different failure mode detection times lengths of the slave nodes.

Thus, one of ordinary skill in the art would not have been motivated to utilize van der Tuijn's method of determining communication link priority to determine a backup master priority.

Accordingly, Appellant respectfully submits that independent claim 8, as well as dependent claim 9, should be allowable over Ying and van der Tuijn because the cited references do not teach or suggest all of the features of the claims and one of ordinary skill in the art would not have been motivated to modify Ying based on the teachings of van der Tuijn to produce the claimed invention.

APPEAL BRIEF
U.S. Application No. 09/904,566

(I) Rejection of claims 10-13 under 35 U.S.C. § 103(a) as being unpatentable over Ying in view of van der Tuijn, Akyol and "Official Notice"

Appellant respectfully submits that neither Akyol nor the Examiner's improper reliance

on Official Notice make up for the above noted deficiencies of Ying and van der Tuijn.

Accordingly, Appellant respectfully submits that claims 10-13 should be allowable over the cited

references at least by virtue of their dependency on claim 8.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and

1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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Date: January 30, 2006

Attorney Docket No.: Q63227

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CLAIMS APPENDIX

CLAIMS 1-14 ON APPEAL:

1.   (Previously Presented) A method for building up backup master information, comprising the steps of:

(a) receiving connection information from at least one of a plurality of slaves in a network;

(b) determining a priority of said at least one of the plurality of slaves to be used as a backup master, when a network master disappears, according to the received connection information; and

(c) announcing the determined priority to at least another one of the plurality of slaves.

2.   (Original) The method of claim 1, wherein the steps (a) through (c) are repeated in a predetermined cycle.

3.   (Original) The method of claim 1, wherein the received connection information includes received signal strength indication (RSSI) and/or link quality information.

4.   (Original) The method of claim 3, wherein, in the step (b), if said at least one of the plurality of slaves has a higher RSSI than another one of the plurality of slaves, said at least one of the plurality of slaves is given a higher priority, which is used to choose a new network master.

5.   (Original) The method of claim 3, wherein, in the step (b), if said at least one of the plurality of slaves has a higher link quality value than another one of the plurality of slaves, said at least one of the plurality of slaves is given a higher priority, which is used to choose a new network master.

6. (Original) The method of claim 1, wherein the network is a Personal Ad-hoc Network.

7. (Original) The method of claim 1, wherein in the step (c), the determined priority of the backup master is announced to the at least another one of the plurality of slaves, through a broadcasting channel.

8. (Previously Presented) A method for designating a new master of a network when a preexisting network master disappears, the method comprising the steps of:

(a) determining at a slave whether the preexisting network master has disappeared;

(b) if the preexisting network master has disappeared, checking a rank assigned to the slave based on connection information received from the slave, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master; and

(c) changing the slave to the new network master if it is determined that the rank is highest of any one assigned to a plurality of slaves.

9. (Original) The method of claim 8, after the step (c), further comprising the step (d) of performing inquiry scan and page scan.

10. (Previously Presented) The method of claim 9, after step (d), further comprising the steps of:

(e) determining whether a new device attempts to establish a connection through the network;

(f) accepting a request of the new device for connection, requesting the new device to change to a role as a slave, and remaining as the new network master;

(g) storing information of the new device, and announcing the information of the new network master and each of the plurality of slaves linked throughout the network, to each of the plurality of slaves linked throughout the network; and

(h) checking for a change of a master mode if there is no connection request from the new device in step (e), returning to the step (d) when no change to the master mode is determined, and terminating the master mode when a change to the master mode is determined.

11.   (Original) The method of claim 10, wherein, in the step (h), the change of the master mode is determined when a role of a device serving as the preexisting network master is changed to a role as one of the plurality of slaves, by a user, when a Bluetooth function of the preexisting network master is switched off, or when power of the preexisting network master is turned off.

12.   (Original) The method of claim 8, wherein step (a) comprises the sub-steps of:

(a1) checking a connection status with the preexisting network master;

(a2) attempting to reconnect with the preexisting network master if disconnection is detected in sub-step (a1);

(a3) checking whether reconnection with the preexisting network master is successful, and returning to the sub-step (a1) if the reconnection with the preexisting network master is successful; and

(a4) determining whether the preexisting network master has disappeared, if reconnection with the preexisting network master is not established in sub-step (a3), and informing a host of the event as a "Disconnection Complete Event".

13.   (Original) The method of claim 12, wherein the sub-step (a1) is repeated in a predetermined cycle while the connection with the preexisting network master remains.

14.   (Previously Presented) A method for establishing a connection between a new master and a remaining plurality of slaves of a network when a preexisting network master disappears, the method comprising the steps of:

(a) checking whether the preexisting network master has disappeared;

(b) checking backup master rank information, when it is determined that the preexisting network master has disappeared in the step (a);

(c) attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information; and

(d) remaining as one of the remaining plurality of slaves if a connection with the new network master is established in the step (c).

EVIDENCE APPENDIX:

There has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or

any other similar evidence.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.